

## CLAIMS

1. A method for reducing the formation of a byproduct polypeptide containing an O-acetylserine residue in place  
5 of a serine residue by adding at least one of histidine, methionine or glycine to the medium in a method for producing a polypeptide containing a serine residue by culturing transformed cells.
2. A method for producing a polypeptide containing a  
10 serine residue by culturing transformed cells, characterized by reducing the formation of a byproduct polypeptide containing an O-acetylserine residue in place of a serine residue by adding at least one of histidine, methionine or glycine to the medium.
- 15 3. The method as defined in Claim 1 or 2 wherein the host cell is a prokaryotic cell or an eukaryotic cell in a method for producing a polypeptide containing a serine residue by culturing transformed cells.
4. The method as defined in Claim 3 wherein the host cell  
20 is a microorganism.
5. The method as defined in Claim 4 wherein the microorganism is *Escherichia coli*.
6. The method as defined in any one of Claims 1 to 5 wherein the molecular weight of the polypeptide containing  
25 a serine residue is about 1000 to 20000.
7. The method as defined in any one of Claims 1 to 6 wherein the polypeptide containing a serine residue is an atrial natriuretic peptide.

8. The method as defined in Claim 7 wherein the atrial natriuretic peptide is human atrial natriuretic peptide.

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